STATE FOREST LAND
ENVIRONMENTAL CHECKLIST

Purpose of Checklist:

The State Environmental Policy Act (SEPA), chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decided whether an EIS is required.

Instructions for Applicants:

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can. *Questions in italics are supplemental to Ecology's standard environmental checklist. They have been added by the DNR to assist in the review of state forest land proposals. Adjacency and landscape/ watershed-administrative-unit (WAU) maps for this proposal are available on the DNR internet website at http://www.dnr.wa.gov under "SEPA Center." These maps may also be reviewed at the DNR regional office responsible for the proposal. This checklist is to be used for SEPA evaluation of state forest land activities.*

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply." Complete answers to the questions now may avoid unnecessary delays later. *All of the questions are intended to address the complete proposal as described by your response to question A-11. The proposal acres in question A-11 may cover a larger area than the forest practice application acres, or the actual timber sale acres.*

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Use of checklist for nonproject proposals:

Complete this checklist for nonproject proposals, even though questions may be answered " does not apply." IN ADDITION, complete the SUPPLEMENTAL SHEET FOR NON PROJECT ACTIONS (part D).

For nonproject actions, the references in the checklist to the words "project," "applicant," and "property or site" should be read as "proposal," "proposer" and "affected geographic area," respectively.

A. BACKGROUND

1. Name of proposed project, if applicable:

   Timber Sale Name: OLY BLOW *Agreement #: 30-084779*

2. Name of applicant: Washington State Department of Natural Resources

3. Address and phone number of applicant and contact person:

   Olympic Region
   411 Tillicum Lane
   Forks, WA 98331

   Contact Person: Jennifer Garstang
   Telephone: (360) 374-6131

4. Date checklist prepared: 06/09/2009

5. Agency requesting checklist: Washington State Department of Natural Resources

6. Proposed timing or schedule (including phasing, if applicable):

   a. *Auction Date: 09/23/2009*
   b. *Planned contract end date (but may be extended): 10/31/2010*
   c. *Phasing: N/A*

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

   Timber Sale

   a. *Site preparation:* Landing piles may be burned upon completion of harvest.

   b. *Regeneration Method:* Sale area will be hand planted the first season after harvest.

   c. *Vegetation Management:* Needs will be assessed 5-7 years after harvest

   d. *Thinning:* Treatment needs will be assessed over time. Pre-commercial and commercial thinning is possible.

   Roads: Road maintenance will occur as necessary on existing roads. Road maintenance may include: road grading, ditch clean-out, re-establishment of ditches, necessary cleaning of inlets and outlets of culverts, and spot patching with rock (if applicable). The PA-L-1000.2 road will be abandoned at the end of operations. Roads used, except the PA-L-1000.2, will be utilized for future management activities.

   Rock Pits and/or Sale: Rock for this proposal will come from an approved commercial source.

Other: Future forest management activities are anticipated to continue within the WAU, and adjacent to the current proposal. Potential activities may include but are not limited to firewood salvage, maple stump treatment, salmonberry treatment, hardwood slashing, pre-commercial thinning, commercial thinning and regeneration harvest. These future activities are connected with this proposal insofar as that they will occur in close proximity to the sale area, and that the roads used by this proposal may be used to perform the required work. All future activities will be consistent with the State's Habitat Conservation Plan (HCP), and applicable policy and planning documents.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

☒*303 (d) – listed water body in WAU:* ☐*temp* ☐*sediment* ☐*completed TMDL (total maximum daily load): Siebert Creek is listed for dissolved oxygen. Bagley Creek is listed for bioassessment and fecal coliform. (**Note the source is the 2008 Integrated Water Quality Assessment available on the Washington Department of Ecology web site at: http://www.ecy.wa.gov/programs/wq/303d/index.html)*
☐*Landscape plan:*
☐*Watershed analysis:*
☐*Interdisciplinary team (ID Team) report:*
☒*Road design plan: Road Plan dated July 8, 2009.*
☐*Wildlife report:*
☐*Geotechnical report:*
☐*Other specialist report(s):*
☐*Memorandum of understanding (sportsmen's groups, neighborhood associations, tribes, etc.):*
☐*Rock pit plan:*
☐*Other: Policy for Sustainable Forests (July 2006); Habitat Conservation Plan (HCP) (September 1997); State Soil Survey; G.I.S. Reports for SEPA Evaluation on Siebert McDonald Watershed Administrative Unit; Weighted Old Growth Habitat Index (WOGHI); Special Concerns and TRAX Reports.*
**All documents will be available for review at the Olympic Region office during the SEPA comment period.*

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

None known.

10. List any government approvals or permits that will be needed for your proposal, if known.

☐*HPA* ☒*Burning permit* ☐*Shoreline permit* ☒*Incidental take permit* ☒*FPA* ☐*Other:*

11. Give brief, complete description of our proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include specific information on project description.)

a. *Complete proposal description: The proposal is a one unit variable retention harvest planned to salvage blowdown timber. There are a total of approximately 29 gross and 25.6 net acres. There will be 2 acres left for wetland protection and 0.3 acres in leave clumps. There will be approximately 0.9 acres on the edge of the wetland and riparian buffers that will have timber that is lying on the ground removed with all standing timber remaining. Approximately 1.1 acres was subtracted for an existing road right of way. Ground based harvest methods will be used. There will be equipment and timing restrictions.*

Sale of Timber:

Estimated Volume:	594 MBF (thousand board feet)
Gross Proposal Area in Acres:	29
Net Sale Area in Acres:	25.6
Type of harvest:	Variable retention with heavy blowdown salvage component.
Total Regeneration Harvest:	24.6 Acres
Logging System:	Ground based methods (Shovel and/or tracked skidder)
Landings: Number	2 new and 1 existing
Total area in acres	0.1 Acres (based on an 50'X 50' impacted area)

Roads:

To be constructed (feet)	0'
To be improved (feet)	0' (reconstruction, does not include pre-haul maintenance)
To be maintained (miles)	3.9 (post-haul maintenance only)
To be abandoned (feet)	465'

b. *Timber stand description pre-harvest (include major timber species and origin date), type of harvest, overall unit objectives.*

This is a second growth conifer stand. Major species include Douglas fir, hemlock, western red cedar and alder. Small amounts of grand fir and cottonwood are present. The stand is approximately 68 years old. There is heavy blowdown in the south and northwest parts of the sale with the northeast part of the sale standing. The ground cover is characterized by sword fern and salal.

A variable retention harvest will be used with shovel and tracked skidder logging methods.

Objectives for this proposal include providing revenue to the Clallam County Forest Board Trust and salvaging blowdown timber before it loses value while protecting ecological values and ecosystem function. Other objectives include protecting wetlands and streams, and leaving large, structurally unique trees and snag recruitment trees to expedite the development of a more diverse, multi-storied canopy layer in the future stand. The southern portion of the sale is near occupied marbled murrelet habitat and will have daily timing restrictions during critical nesting season. Contract language and equipment limitations will help reduce soil impacts. No rubber tired skidders will be allowed and harvest operations will be suspended during periods of wet weather. Objectives also include reforesting the area to a well-stocked condition, and maintaining options for future land use activities.

c. *Road activity summary. See also forest practice application (FPA) for maps and more details.*

Type of Activity	How Many	Length (feet) (Estimated)	Acres (Estimated)	Fish Barrier Removals (#)
Construction		0	0	0

Reconstruction		0		0
Abandonment		465	0.1	0
Bridge Install/Replace	0			0
Culvert Install/Replace (fish)	0			0
Culvert Install/Replace (no fish)	0			

Existing roads will be used for this proposal. Two temporary landings will be constructed. Road maintenance will occur as necessary on existing roads.

12. Location of proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist. *(See timber sale map available at DNR region office, and/or color landscape/WAU map on the DNR website http://www.dnr.wa.gov under "SEPA Center.")*

a. Legal description: The sale is located in Section 5 of Township 29 North, Range 4 West, W.M.

b. Distance and direction from nearest town (include road names):

The sale is located approximately 9.5 miles from Sequim on the Hooker, Atterberry, Cassidy and PA-L-1000 roads.

c. Identify the watershed administrative unit (WAU), the WAU Sub-basin(s), and acres. (See also landscape/WAU map on DNR website http://www.dnr.wa.gov under " SEPA Center.")

WAU Name	WAU Acres	Proposal Acres
SIEBERT MCDONALD	36263.4	29

13. Discuss any known future activities not associated with this proposal that may result in a cumulative change in the environment when combined with the past and current proposal(s). (See digital ortho-photos for WAU and adjacency maps on DNR website http://www.dnr.wa.gov under "SEPA Center" for a broader landscape perspective.)

This proposal is located within the Siebert McDonald WAU. The proposal stands, as well as other State managed stands in this WAU, will be scheduled for regeneration, commercial thinning and partial cut harvests as they meet the department's financial and ecological policies and mandates. DNR's HCP requires the Department to manage landscapes with the intent to preserve and enhance habitat used by fish and older-forest dependent species. The HCP is designed to protect and promote fish and wildlife species and their habitats over a broad regional area.

The DNR manages approximately 10,107 acres of forestland within the WAU, which equates to approximately 27.9% of the WAU's dry land acres. Approximately 1,163 acres of these lands have been harvested using the regeneration method within the past five years. Other owners include 6,728 acres (18.6%) Federal land and 19,428 acres (53.6%) of private and other public land.

Primary land uses in the WAU are agriculture, commercial forestry and residential. Specific activities planned by private owners within the WAU are unknown. It is anticipated that commercial forest lands will be managed for timber production with future timber harvest activity continuing. Agricultural lands also exist within the WAU and near the proposal area. It is unknown if this management will continue. There is an increasing trend of converting commercial forest and agricultural lands into rural residences especially in the northern portion of the WAU. This is expected to continue to occur within the WAU.

The land immediately surrounding the proposal is State and private land used for commercial forestry.

Several measures have been taken to reduce the risk of negative environmental impacts. Seven percent of the gross proposal acreage will remain in wetlands, WMZs, and leave tree areas. Dispersed leave trees will provide structure for many wildlife species to use, and reduce the visual impacts of the harvest. An average of 8 trees per acre will be left. Snags and down wood will also be provided.

Assessments have been performed to evaluate the potential use of the proposal area by threatened and endangered species, and Species of Concern. Road network planning and road design have been performed in order to minimize the amount of road construction needed, and to ensure the quality of existing roads. Timing restrictions on haul will help to maintain the integrity of existing roads, and reduce the potential for off site movement of sediments. Ground yarding operations shall be suspended during periods of severe wet soil conditions when rutting of skid roads begins. Equipment and timing restrictions will also apply to the use of harvest equipment in order to prevent rutting and minimize soil disturbance. Forest cover analysis was also performed to assess hydrologic maturity within WAU boundaries. G.I.S landscape reports were checked to evaluate the location of this proposal relative to environmentally sensitive areas. The "adjacency" map has been reviewed and there are no changes to be noted. All current and future activities will be conducted according to the State's HCP, Policy for Sustainable Forests, and State Forest Practices Rules, and are expected to mitigate for any potential adverse cumulative effects.

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site (check one):

☐Flat, ☒Rolling, ☐Hilly, ☐Steep Slopes, ☐Mountainous, ☐Other:

1) General description of the WAU or sub-basin(s) (landforms, climate, elevations, and forest vegetation zone).

The sale is located in the Siebert McDonald WAU on the Olympic Peninsula along the Strait of Juan de Fuca. Lower elevations are found along the north end, where highway 101 runs through the WAU. Traveling inland to the south the topography steadily increases. The steep and more mountainous terrain is located on the south end of the WAU within Olympic National Park. Sub-basins are oriented north to south flowing from the mountains to the Strait. Residential neighborhoods are scattered throughout the WAU, even up to the foothills at the edge of the park. The lower elevations contain a variation of flat to steep terrain features. The upper elevations contain some steep, mountainous terrain.

The WAU ranges in elevation from sea level to 5926 feet. The WAU varies in precipitation received from 10-50 inches per year. The major timber types present in the lower elevations are Douglas fir, western hemlock, red cedar, and red alder. The majority of the lower elevation forests were harvested and burned in the past, and have been reforested with Douglas fir.

2) *Identify any difference between the proposal location and the general description of the WAU or sub-basin(s).*

None.

b. What is the steepest slope on the site (approximate percent slope)?

Approximately 50%. This represents less than 1% of the proposal. The majority of the proposal is less than 20% slope.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland. *Note: The following table is created from state soil survey data. It is a roll-up of general soils information for the soils found in the entire sale area. It is only one of several site assessment tools used in conjunction with actual site inspections for slope stability concerns or erosion potential. It can help indicate potential for shallow, rapid soil movement, but often does not represent deeper soil sub-strata. The actual soils conditions in the sale area may vary considerably based on land-form shapes, presence of erosive situations, and other factors. The state soil survey is a compilation of various surveys with different standards.*

State Soil Survey #	Soil Texture or Soil Complex Name	% Slope	Acres	Mass Wasting Potential	Erosion Potential
4331	GRAVELLY LOAM	10-30	29	INSIGNIFIC'T	LOW

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

1) *Surface indications:*

No surface indicators of unstable soils were observed in the immediate vicinity.

2) *Is there evidence of natural slope failures in the sub-basin(s)?*
☐*No* ☒*Yes, type of failures (shallow vs. deep-seated) and failure site characteristics:*

Natural slope events occur within incised draws where streams undercut the toe of the slope, causing some slides to begin. Slope failures have occurred on very steep slopes underlain by unstable soils during periods of extreme saturation. Deep-seated failures are known to occur on over steepened bluffs along the shorelines of the Strait of Juan de Fuca and the Puget Sound where the tidal action has eroded the toe of the slope. While specific instances within the WAU have not been identified, these conditions exist within the WAU, so it is likely that there are failures of this type present within the sub-basins. These failures are mostly shallow-rapid in nature. There have probably also been deep-seated slides within the sub-basins.

3) *Are there slope failures in the sub-basin(s) associated with timber harvest activities or roads?*
☐*No* ☒*Yes, type of failures (shallow vs. deep-seated) and failure site characteristics:*
Associated management activity:

Slope failures on the Olympic Peninsula typically have occurred where road construction has been performed on extremely steep unstable slopes. Road failures are primarily associated with older, poorly constructed sidecast roads. Exact instances have not been identified within the WAUs but it seems likely that some are present.

4) *Is the proposed site similar to sites where slope failures have occurred previously in the sub-basin(s)?*
☒*No* ☐*Yes, describe similarities between the conditions and activities on these sites:*

There are no similarities.

5) *Describe any slope stability protection measures (including sale boundary location, road, and harvest system decisions) incorporated into this proposal.*

This proposal is not on or near unstable slopes.

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.
Approx. acreage new roads: 0 Approx. acreage new landings: 0.1 Fill source: On-site native material and privately owned commercial rock sources.

There will be no new roads. One existing landing and two new roadside landings will be used.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

A small amount of surface erosion incidental to freshly exposed soils is anticipated until the site is revegetated.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? *Approximate percent of proposal in permanent road running surface (includes gravel roads): 0.7%*

There is an existing road adjacent to the unit. There is one road passing through the unit. No new road will be constructed. While exact percentages associated with this proposal are difficult to estimate, the area covered with impermeable surfaces will be approximately 0.7% of the land in the proposal area will be in permanent road running surface as defined by compacted pit run ballast or crushed surfacing. This is based on a 12 ft running surface on existing roads, and a 50 ft X 50 ft rocked landing area. The new landings will not be rocked if the harvest occurs in dry weather only.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

(Include protection measures for minimizing compaction or rutting.)

Roads have been constructed with properly located ditches, ditchouts and cross drains to divert water onto stable forest floor and/or into stable natural drainages. Road maintenance will be restricted from November 1 to April 30, when the potential for erosion and sediment movement is at its peak.

The proposal will be harvested with shovel and tracked skidder methods. Harvest and timber haul will be restricted from November 1 to April 30 when the potential for erosion, rutting and sediment movement is at its peak.

Rubber-tired skidders will not be allowed on any part of the proposal in order to prevent excessive rutting and minimize soil disturbance. On tracked skidder harvest method areas lead end suspension will be required while yarding. Some skid trail segments will have water bars installed as needed to control water flow. Use of feller-bunchers will be limited during the same months other ground equipment is restricted to minimize compaction and rutting.

Contract language will also require all operations to be suspended during periods of wet weather or wet soil conditions when rutting of skid trails begins.

No equipment will be allowed into the wetland, WMZ, or leave tree areas.

2. Air

a. What types of emissions to the air would result from the proposal (i.e., dust *from truck traffic, rock mining, crushing or hauling*, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

Insignificant amounts of engine exhaust from logging equipment and dust from passing log trucks is expected. Logging slash, if burned, will be burned adhering to the State's smoke management plan.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

None.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

Debris burning will adhere to the State's smoke management plan.

3. Water

a. Surface:

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into. *(See timber sale map available at DNR region office, or forest practice application base maps.)*

There is a 0.26 acre forested wetland located in the northeast portion of the sale. There is a Type 5 stream leaving this wetland and flowing toward the northwest. There is a second Type 5 stream starting from underground approximately 50 feet inside the boundary on the west side and flowing to the west. There are some wet areas on the hillside above this but no defined channel. Both streams are Type 5 due to steep slopes below the sale unit further down the sides of the ridge. These streams are unnamed and are tributaries to McDonald Creek. Both streams are drying up at the present (late spring) and are most likely seasonal.

a) Downstream water bodies:

McDonald Creek and the Strait of Juan de Fuca.

b) Complete the following riparian & wetland management zone table:

Wetland, Stream, Lake, Pond, or Saltwater Name (if any)	Water Type	Number (how many?)	Avg RMZ/WMZ Width in Feet (per side for streams)
Forested Wetland < 1 acre in size	N/A	1	100 feet
Un-Named Type 5 streams	Type 5	2	No required RMZ, buffered with leave trees

c) List RMZ/WMZ protection measures including silvicultural prescriptions, road-related RMZ/WMZ protection measures, and wind buffers.

The forested wetland was in a low lying area and was protected from the wind event. It is 0.26 acres so was given a 100 foot WMZ. A leave area was placed on the north side of the wetland so no equipment would need to cross it. Blowdown trees crossing or adjacent to the WMZ boundary will be removed. There will be no equipment entry into the WMZ and full suspension is required. No standing trees will be harvested.

No RMZ's or wind buffers are required on the streams. However, the northern stream is protected by a small leave strip and the southern has a leave area surrounding it. There will be some removal of down trees from the southern leave area. This will be accomplished with no equipment entry into the leave area and full suspension required. Some trees have been blown down near the northern stream and will be removed. The trees can be removed without the need for equipment to enter the stream or the small swale it lies in. Logs will be lifted out with full suspension. No standing trees will be removed within either leave area.

There are no roads near the water in the north end of the sale.

The south stream passes through an existing pipe in an existing road and will not be disturbed with proposal.

2) Will the project require any work over, in, or adjacent to (within 200 feet) to the described waters? If yes, please describe and attach available plans.
☐*No* ☒*Yes (See RMZ/WMZ table above and timber sale map available at DNR region office.)*
Description (include culverts):

Harvest operations will occur within 200 ft of the wetlands and streams.

No removals are to occur within the wetland, and no standing trees will be harvested within the adjacent WMZ leave areas. Blowdown across or immediately adjacent to the outer WMZ boundary will be harvested. Contract language will require that no equipment may operate within the forested wetland or WMZs. The contract will also prohibit timber to be felled into, across, or yarded through these areas. Full suspension of every log removed will be required.

No RMZ is required, however all standing trees will be left within the swale containing the stream. Blowdown will be salvaged from within this area. Contract language will restrict equipment from operating near the Type 5 streams. Full suspension of any logs removed will be required.

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

None.

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known. *(Include diversions for fish-passage culvert installation.)*
☒*No* ☐*Yes, description:*

Not Applicable.

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.
☒*No* ☐*Yes, describe location:*

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.
☒*No* ☐*Yes, type and volume:*

7) Does the sub-basin contain soils or terrain susceptible to surface erosion and/or mass wasting? What is the potential for eroded material to enter surface water?

It is possible that surface erosion is occurring in areas as described in Part B.1.d.1 & 2

The G.I.S. Report for SEPA Evaluation on the WAU indicates there are soils with the potential for surface erosion and/or mass wasting within the WAU. Exact numbers for the sub-basins are not available but it seems likely that such soils are present.

According to the Washington State Soil Survey the erosion potential within the proposal area is low and the mass wasting potential is insignificant. The sale is located on a ridgetop and is flat to gently rolling so there is minimum potential for off site movement of sediment.

8) Is there evidence of changes to the channels in the WAU and sub-basin(s) due to surface erosion or mass wasting (accelerated aggradations, erosion, decrease in large organic debris (LOD), change in channel dimensions)?
☐*No* ☒*Yes, describe changes and possible causes:*

There are some channels in the WAU which show evidence of accelerated aggradations due to a combination of factors including surface erosion, slides and increased peak flows. These changes are attributed to both natural events and human activity and occur throughout the reach of some streams in the WAU.

9) Could this proposal affect water quality based on the answers to the questions 1-8 above?
☐*No* ☒*Yes, explain:*

A small increase in surface runoff is anticipated. Runoff is expected to return to pre-harvest conditions relative to this proposal as the stand grows and nears hydrological maturity.

Given the topography, soil types and protective measures being taken, this proposal should have little affect on stream and water quality.

10) What are the approximate road miles per square mile in the WAU and sub-basin(s)?

The G.I.S. database indicates that the WAU has approximately 1.0 miles of road per square mile on DNR lands, and an average of 2.1 miles per square mile across all ownerships.

Are you aware of areas where forest roads or road ditches intercept sub-surface flow and deliver surface water to streams, rather than back to the forest floor?
☐*No* ☒*Yes, describe:*

There are likely cases where this has occurred elsewhere in the WAU. It has not been observed on or near the proposal.

11) Is the proposal within a significant rain-on-snow (ROS) zone? If not, ***STOP HERE*** *and go to question B-3-a-13 below. Use the WAU or sub-basin(s) for the ROS percentage questions below.*

☒*No* ☐*Yes, approximate percent of WAU in significant ROS zone.*
Approximate percent of sub-basin(s):

12) *If the proposal is within the significant ROS zone, what is the approximate percentage of the WAU or sub-basin(s) within the significant ROS zone (all ownerships) that is (are) rated as hydrologically mature?*
Does not apply.

13) *Is there evidence of changes to channels associated with peak flows in the WAU or sub-basin(s)?*
☐*No* ☒*Yes, describe observations:*

There have been increases in peak flows associated with small drainage basins that contain a high percentage of young (less than 25 years old) timber or pasture that have created channel scouring. Specific instances of this occurring were not identified directly adjacent to the proposed timber sale units.

14) *Based on your answers to questions B-3-a-10 through B-3-a-13 above, describe whether and how this proposal, in combination with other past, current, or reasonably foreseeable proposals in the WAU and sub-basin(s), may contribute to a peak flow impact.*

A small increase in peak flow is anticipated as a result of this proposal. Negative impacts are not anticipated based on the following: the size of the harvest area in relation to the acreage contained within the WAU and sub-basin; the ability of the proposed harvest area (and surrounding forestland) to regain hydrologic maturity through time; and the buffering effects of wetland management zones. All current and future activities will be conducted according to the State's HCP, Policy for Sustainable Forests, and State Forest Practices Rules and are expected to mitigate for any potential adverse cumulative effects.

15) *Is there water resource (public, domestic, agricultural, hatchery, etc.), or area of slope instability, downstream or downslope of the proposed activity that could be affected by changes in surface water amounts, quality, or movements as a result of this proposal?*
☐*No* ☒*Yes, possible impacts:*

There are multiple registered surface water rights with the Department of Ecology that are potentially located downstream of the proposal area. It is uncertain if they are actually downstream since there is not enough information provided in the Special Concerns Report to determine their exact locations. However, it must be assumed that several are downstream. It must also be assumed that there are more water rights downstream beyond the immediately adjacent sections.

Based on the factors described in part B.3.a.14, negative impacts resulting from increased flows is not anticipated.

This proposal is expected to have minimal to no effect on water quality.

16) *Based on your answers to questions B-3-a-10 through B-3-a-15 above, note any protection measures addressing possible peak flow/flooding impacts.*

The proposal has a WMZ and leave tree areas adjacent to the streams. There will also be seasonal operating restrictions. Water will be routed onto stable forest floor. Logging methods have been selected to minimize soil compaction.

The spatial forest cover analysis was examined to ensure adherence to current policy on hydrologic maturity within WAU boundaries. G.I.S landscape reports were checked to evaluate the location of this proposal relative to the rain-on-snow zone-mapping units. Prompt reforestation will initiate a move towards the recovery of hydrologic maturity.

For the DNR owned lands in the WAUs: Careful past, present, and future harvest planning has and will continue to distribute harvest across the landscape, through time, in order to reduce hydrologic impacts within the WAU. This will be accomplished by maintaining a level of hydrologically mature stands to help reduce peak flows contributed from DNR managed lands. Also, road network planning and road design have been performed in order to minimize the amount of road construction needed for future proposals, and to ensure the quality of existing and newly constructed roads. All current and future activities will be conducted according to the State's HCP, Policy for Sustainable Forests, and State Forest Practices Rules, and are expected to mitigate for any potential adverse cumulative effects.

b. Ground *Water*:

1) Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.

No.

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

Does not apply.

3) *Is there a water resource use (public, domestic, agricultural, hatchery, etc.), or area of slope instability, downstream or down slope of the proposed activity that could be affected by changes in groundwater amounts, timing, or movements as a result this proposal?*
☐*No* ☒*Yes, describe:*

There are multiple ground water rights registered with the Department of Ecology that are located in adjacent sections. It is uncertain if they are actually downstream since there is not enough information provided in the Special Concerns Report to determine their exact locations. However, it must be assumed that several are downstream. It must also be assumed that there are more water rights downstream beyond the immediately adjacent sections.

A small increase in groundwater volume is anticipated during peak storm events. There is a potential for some increase in water yield downstream of the proposal. Based on the factors described in parts B.3.a.14, negative impacts resulting from increased flows are not anticipated.

a) Note protection measures, if any.

See answer B.3.a.16 above

c. Water Runoff (including storm water):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

Storm water will be collected by ditches, ditchouts and cross drains and diverted to stable locations on the forest floor.

2) Could waste materials enter ground or surface waters? If so, generally describe.

Does not apply.

a) Note protection measures, if any.

Does not apply.

d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:
(See surface water, ground water, and water runoff sections above, questions B-3-a-1-c, B-3-a-16, B-3-b-3-a, and B-3-c-2-a.)

The WMZ and leave tree area boundaries were located to keep equipment out of the WMZ and streams.

Also see B.1.h. and B.3.c.1 above.

Yarding equipment restrictions and timing restrictions for road work will reduce the potential for off-site movement of sediment during the period of late fall through early spring when surface run-off is at its peak. The sale design, including selected harvest systems, should maintain natural flow patterns.

4. Plants

a. Check or circle types of vegetation found on the site:

☒deciduous tree: ☒alder, ☒maple, ☐aspen, ☒*cottonwood,* ☐*western larch,* ☐*birch,* ☐other:
☒evergreen tree: ☒*Douglas fir,* ☒*grand fir,* ☐*Pacific silver fir,* ☐*ponderosa pine,* ☐*lodgepole pine,* ☒*western hemlock,* ☐*mountain hemlock,* ☐*Englemann spruce,* ☐*Sitka spruce,* ☒*red cedar,* ☐*yellow cedar,* ☐other:
☒shrubs: ☐*huckleberry,* ☒*salmonberry,* ☒*salal,* ☐*other: Oregon grape*
☐grass
☐pasture
☐crop or grain
☒wet soil plants: ☐cattail, ☐buttercup, ☐bullrush, ☐skunk cabbage, ☒*devil's club,* ☐other:
☐water plants: ☐water lily, ☐eelgrass, ☐milfoil, ☐other:
☐other types of vegetation:
☐*plant communities of concern:*

b. What kind and amount of vegetation will be removed or altered? *(See answers to questions A-11-a, A-11-b, B-3-a-1-b and B-3-a-1-c. The following sub-questions merely supplement those answers.)*

This proposal involves the variable retention harvest of 25.6 acres of 68 year old mixed species timber, mostly conifer. Approximately half of the sale area suffered heavy blowdown.

1) Describe the species, age, and structural diversity of the timber types immediately adjacent to the removal area. (See landscape/WAU and adjacency maps on the DNR website at: http://www.dnr.wa.gov under "SEPA Center.")

The unit is bordered on the west by the PA-L-1000 road. On the other side of the road is 7 year old State timber. The north edge is private timber estimated to be 15 to 25 years old and has little structural diversity. The east side is bordered on the north by a recent State variable retention harvest. While greenup has not been reached on this stand, the overall acreage of the two units combined is less than 100 acres. The south portion of the unit is bordered by 68 year second growth conifer.

2) Retention tree plan:

An average of 8 trees per acre will be retained in this proposal. These trees will left both in clumps and as scattered individuals. Emphasis was placed on marking individual trees that were large, structurally unique, had high wildlife value or were needed for stream protection.

c. List threatened or endangered *plant* species known to be on or near the site.

TSU Number	FMU_ID	Common Name	Federal Listing Status	WA State Listing Status
None Found in Database Search				

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

All units will be promptly replanted after harvest. Native on-site trees will be used as leave trees. Leave trees are expected, though not depended on, to contribute to the reforestation of the proposal.

5. Animal

a. Circle or check any birds animals *or unique habitats* which have been observed on or near the site or are known to be on or near the site:

birds: ☐hawk, ☐heron, ☐eagle, ☒songbirds, ☐*pigeon*, ☐other:
mammals: ☒deer, ☐bear, ☐elk, ☐beaver, ☐other:
fish: ☐bass, ☐salmon, ☐trout, ☐herring, ☐shellfish, ☐other:
unique habitats: ☐*talus slopes,* ☐*caves,* ☐*cliffs,* ☐*oak woodlands,* ☐*balds,* ☐*mineral springs*

b. List any threatened or endangered species known to be on or near the site *(include federal- and state-listed species).*

TSU Number	FMU_ID	Common Name	Federal Listing Status	WA State Listing Status
1	75272	SPOTTED OWL: Site:706-MCDONALD CREEK	THREATENED	ENDANGERED

T&E Species and Wildlife Habitat
A check of the DNR's "TRAX" system, Special Concerns Report, and PHS database indicates the presence of one threatened wildlife species in the general area of the proposal, specifically the spotted owl. There are no other threatened or endangered wildlife species in the general proposal area. There are sensitive salmonoid species in downstream waters away from the sale.

The sale has been screened for spotted owl habitat and is in non-habitat for spotted owls as identified by structure definition. The proposal is not in an Owl Area.

The proposal is not within marbled murrelet habitat. There is occupied habitat to the southwest of the sale and the portion of the sale south of the PA-L-1000 road will have daily timing restrictions during the critical nesting season.

c. Is the site part of a migration route? If so, explain.
☒*Pacific flyway* ☐*Other migration route:* *Explain if any boxes checked:*

The sale is located within the Pacific flyway but the units do not offer good habitat for resting of migrating birds.

d. Proposed measures to preserve or enhance wildlife, if any:

Dispersed leave trees will provide structure for many wildlife species to use. The minimum density of leave trees will average 8 trees per acre for the sale. Snags and down wood will also be provided. The new open cover type created by the harvest will enhance foraging opportunities for some wildlife species.

1) *Note existing or proposed protection measures, if any, for the complete proposal described in question A-11.*

Species /Habitat: Spotted Owl — Protection Measures: This proposal is in non-habitat and complies with HCP commitments.

Species /Habitat: marbled murrelet — Protection Measures: Daily timing restrictions in south half of unit during critical nesting season.

Species /Habitat: Salmonid Species — Protection Measures: Protection of water quality through and aquatic/riparian habitat through WMZ Buffers, leave tree areas, maintenance of roads to adequately divert runoff, and harvest techniques that reduce soil displacement.

6. Energy and Natural Resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

Does not apply

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

Does not apply

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

Does not apply

7. Environmental Health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

The operating of heavy machinery could pose a minimal level of potential hazard. Harvest operations will generate logging slash and will increase the risk of fire for a period of time. Contract language and State burning rules will require operations to be performed in a manner that will reduce the risk of fire. Fire suppression tools and equipment will be made readily available on site.

1) Describe special emergency services that might be required.

None.

2) Proposed measures to reduce or control environmental health hazards, if any:

Contract language will require that preventative measures be taken to avoid on site disposal, or spilling of hazardous materials. The reporting and cleanup of any spills of petroleum based products or other waste will also be required.

b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

Does not apply.

2) What types and levels of noise would be created by or associated with the project on a short-term or long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from this site.

Noise will be created from chainsaws, heavy equipment, and log truck traffic during daylight hours while the sale is active. This is expected to last several months.

3) Proposed measures to reduce or control noise impacts, if any:

None. The proposal is not located near any residential areas.

8. Land and Shoreline Use

a. What is the current use of the site and adjacent properties? *(Site includes the complete proposal, e.g. rock pits and access roads.)*

The current use of the site is timber production. All adjacent property, both State and private, is also used for timber production.

b. Has the site been used for agriculture? If so, describe.

No.

c. Describe any structures on the site.

There are no structures on the site.

d. Will any structures be demolished? If so, what?

Does not apply.

e. What is the current zoning classification of the site?

Commercial forest.

f. What is the current comprehensive plan designation of the site?

Commercial Forest.

g. If applicable, what is the current shoreline master program designation of the site?

Does not apply.

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.

No.

i. Approximately how many people would reside or work in the completed project?

None.

j. Approximately how many people would the completed project displace?

Does not apply.

k. Proposed measures to avoid or reduce displacement impacts, if any:

Does not apply.

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

Proposed activities are compatible with land use designations.

9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

Does not apply.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

Does not apply.

c. Proposed measures to reduce or control housing impacts, if any:

Does not apply.

10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principle exterior building material(s) proposed?

Does not apply.

b. What views in the immediate vicinity would be altered or obstructed?

1) Is this proposal visible from a residential area, town, city, developed recreation site, or a scenic vista?
☐*No* ☒*Yes, viewing location:*

Portions of the proposal will be visible from a few houses located in the area to the west of the unit.

2) Is this proposal visible from a major transportation or designated scenic corridor (county road, state or interstate highway, US route, river, or Columbia Gorge SMA)?
☒*No* ☐*Yes, scenic corridor name:*

3) How will this proposal affect any views described in 1) or 2) above?

The views from the residences will be altered by removing mature timber until regeneration can be established. Leave trees will be left at a rate of 8 per acre with some clumped.

c. Proposed measures to reduce or control aesthetic impacts, if any:

On those areas that are visible, dispersed retention of leave trees will help break up the outlines of the harvest. Prompt reforestation will limit the length of time the harvest area will be visible.

11. Light and Glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

None.

b. Could light or glare from the finished project be a safety hazard or interfere with views?

Does not apply.

c. What existing off-site sources of light or glare may affect your proposal?

None.

d. Proposed measures to reduce or control light and glare impacts, if any:

None.

12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?

There are informal opportunities for hiking, camping, biking, bird watching, wildlife viewing, hunting, mountain biking, and horseback riding in the vicinity. Logging roads in the area are also used for motorcycle riding, mountain bike riding, horseback riding and ATV riding.

b. Would the proposed project displace any existing recreational uses? If so, describe:

Yes, the proposal would temporarily displace some recreational activity. The area immediately surrounding the site will not be available to recreational use during timber harvest activity. Permanent displacement of these uses is not anticipated.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

No measures will be taken since impacts are thought to be minimal. The existing roads to be maintained as part of this proposal will continue to be used for informal recreation.

13. Historic and Cultural Preservation

a. Are there any places or objects listed on, or proposed for national, state, or local preservation registers known to be on or next to the site? If so, generally describe.

A check of DNR's TRAX system indicates there are no known places or objects within this or adjacent sections.

b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.

Does not apply.

c. Proposed measures to reduce or control impacts, if any:
(Include all meetings or consultations with tribes, archaeologists, anthropologists or other authorities.)

Does not apply.

14. Transportation

a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.

No public roads or highways serve the site. The closest public road is Autumn County Road approximately 3.8 miles by road to the north. Access is over existing logging roads.

1) Is it likely that this proposal will contribute to an existing safety, noise, dust, maintenance, or other transportation impact problem(s)?

No. The transportation system is designed to accommodate heavy commercial truck traffic. The forest roads were designed to accommodate commercial timber extraction and the sale will be consistent with past levels of use.

b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

No; approximately five miles.

c. How many parking spaces would the completed project have? How many would the project eliminate?

Does not apply.

d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).

There will be no new roads. Existing roads will receive maintenance as needed.

1) How does this proposal impact the overall transportation system/circulation in the surrounding area, if at all?

There will be no changes.

e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

No.

f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.

A minor number of trips will be generated in association with normal land management activities.

g. Proposed measures to reduce or control transportation impacts, if any:

None.

15. Public Services

a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.

No. There is an extremely low risk of injuries associated with logging. This risk will be insignificant.

b. Proposed measures to reduce or control direct impacts on public services, if any.

None.

16. Utilities

a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.

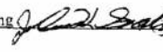
None.

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

None.

C. SIGNATURE

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Completed by: Jennifer Garstang  Small Sales Forester Date: 8/11/09
Title